UNITED STATES PATENT AND TRADEMARK OFFICE

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10/530,740	10/13/2005	Thomas Ahrndt	2002P09336WOUS	9892

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *03 September 2009*.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *29, and 32 - 43* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *29, and 32 - 43* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This is a final action for application number 10/530,740 based on after non-final filed on 09/03/2008. The original application was filed on 04/08/2005. Claims 29 and 32 – 43 are currently pending and have been considered below. Claims 1 – 28, 30, and 31 were cancelled. Claims 29 and 37 are independent claims. Claims 29, 37, 39, and 40 are amended.

Applicant's Response

Applicant's arguments filed in the amendment filed 09/03/2009, have been fully considered but are not moot in view of new grounds of rejection. The reasons are set forth below

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 29, 33 – 40, 42, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tang et al. (US 2004/0059821), in view of Komine et al. (US 7,281,027) and further in view of Sugikawa et al. (US 5,949,772)

Regarding claim 29, a method for controlling an authentication in a

telecommunications network, comprising: providing, at a subscriber terminal device, an

external data transmission interface, **[a wide area network (WAN) interface 105b, as**

shown in Fig. 1, Ref # 105b, (Tang et al., Paragraph 40)],

the external data transmission interface having a physical data transmission

channel, and an authentication channel configured to interface with a

telecommunications network, **[In the case of the dial-up mode of application, a valid**

PPP username and password is transmitted from the user terminal using a user

interface discussed in further detail, (Tang et al., Paragraph 42)],

connecting the subscriber terminal device to an internet service provider, **[the**

remote server 107 is configured to connect to the data network 109 via a

communication link 108. As discussed above, the data network may include the

Internet or a corporate data network, (Tang et al., Paragraph 41),

the connection by the external data transmission interface to the internet service

provider via a telecommunications central office exchange, **[The access device 105 is**

further configured to include a wide area network (WAN) interface 105b to

operatively couple to a remote server 107 through a WAN connection 106, (Tang

et al., Paragraph 40)],

monitoring data traffic received on the external data transmission interface and

which is received by the subscriber terminal device, **[the user terminal LAN**

connection to the access device 105 is monitored to detect when the user

terminal 101 has transmitted a request to terminate the PPP session, or when the

WAN connection 106 to the access device 105 is disconnected, (Tang et al.,

Paragraph 53)],

Tang et al. fails to explicitly teach controlling logon and logoff procedures in the

authentication channel based on the monitored data traffic,

Komine et al. teaches an account authentication means including a user account

management table for managing user account information and managing logon/logoff

state information indicating a logged-on/logged-off state of the server application,

(Komine et al., Col. 9, Lines 38-45), to provide services and to a network monitoring

system for performing distributed processing to monitor a network, **(Komine et al., Col.**

1, Lines 12-16),

It would have been obvious to one of ordinary skill in the art at the time of the

invention was made to modify Tang et al. by controlling logon and logoff procedures in

the authentication channel based on the monitored data traffic, wherein Komine et al.

teaches an account authentication means including a user account management table

for managing user account information and managing logon/logoff state information

indicating a logged-on/logged-off state of the server application, **(Komine et al., Col. 9,**

Lines 38-45), to provide services and to a network monitoring system for performing

distributed processing to monitor a network, **(Komine et al., Col. 1, Lines 12-16)**,

The modified Tang et al. fails to teach disconnecting the subscriber terminal

device from the internet service provider by a logoff procedure in the authentication

channel when no data traffic is received within a duration of time,

Sugikawa et al. teaches that if any of the terminal identification data ceases to be received within a predetermined time, renders a judgment of non-communicability to delete the particular terminal from the communicable terminal memory, **(Sugikawa et al., Col. 28, lines 7 - 15),** in order to provide a greater flexibility of the network structure, **(Sugikawa et al., Col. 2, lines 16 – 18),**

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the modified Tang et al. by disconnecting the subscriber terminal device from the internet service provider by a logoff procedure in the authentication channel when no data traffic is received within a duration of time, **(Sugikawa et al., Col. 28, lines 7 - 15),** in order to provide a greater flexibility of the network structure, **(Sugikawa et al., Col. 2, lines 16 – 18).**

Regarding claim 33, the method according to claim 29, further comprising controlling the physical data transmission channel of the external data transmission interface based on the monitored data traffic, **[the PPP includes three main components, Link Control Protocol (LCP), Challenge Handshake Authentication Protocol/PPP Authentication Protocols (CHAP/PAP), and Internet Protocol Control Protocol (IPCP), (Tang et al., Paragraph 5)].**

Regarding claim 34, the method according to claim 29, wherein the physical data transmission channel is always active, **[the data communication system 100 includes a plurality of user terminals 101, 102, 103, each operatively coupled to an**

access device 105 via a LAN connection 104, (Tang et al., Paragraph 39)].

Regarding claim 35, the method according to claim 29, further comprising:

providing, at the subscriber terminal device, an internal data transmission interface

configured to interface with a data processing unit, **[the user terminal may be**

configured to transmit a connect request to the access device in a dial-up

application mode, in which case, (Tang et al., Paragraph 15)].

monitoring data traffic received by the internal data transmission interface, **[the**

user terminal LAN connection to the access device 105 is monitored to detect

when the user terminal 101 has transmitted a request to terminate the PPP

session, or when the WAN connection 106 to the access device 105 is

disconnected, (Tang et al., Paragraph 53)],

and re-connecting the subscriber terminal device to the internet service provider

by a logon procedure in the authentication channel when the data traffic is received by

the internal data transmission interface, **[When configured to operate in the NAT**

router mode, the access device couples to user terminals via a Local Area

Network (LAN) and to a remote server via a Wide Area Network (WAN). The

remote server in turn connects to the Internet, (Tang et al., Paragraph 8)].

Regarding claim 36, the method according to claim 29, further comprising:

monitoring data traffic received by the external data transmission interface, **[the user**

terminal LAN connection to the access device 105 is monitored to detect when

the user terminal 101 has transmitted a request to terminate the PPP session, or

when the WAN connection 106 to the access device 105 is disconnected, (Tang et

al., Paragraph 53)],

and re-connecting the subscriber terminal device to the internet service provider

by a logon procedure in the authentication channel when the data traffic is received by

the external data transmission interface, **[When configured to operate in the NAT**

router mode, the access device couples to user terminals via a Local Area

Network (LAN) and to a remote server via a Wide Area Network (WAN). The

remote server in turn connects to the Internet, (Tang et al., Paragraph 8)].

Regarding claim 37, a customer premises equipment, comprising: a data

processing unit, **[The access device 105 includes a LAN interface 105a to**

operatively couple each of the user terminals 101, 102, 103 to the access device

105, (Tang et al., Paragraph 39)],

an xDSL modem having a first interface and a second interface, the first interface

for a connection between the xDSL modem and the data processing unit in order for the

xDSL to receive a first data traffic, **[One example includes the xDSL (Digital**

Subscriber Line) type connection using an access device such as a DSL modem,

which connects to the traditional twisted copper pair telephone lines to deliver

high speed data transmission substantially faster than the traditional 56K dial-up

type modems, (Tang et al., Paragraph 2)],

the second interface for a connection between the xDSL modem and an internet

service provider via a telecommunications network exchange in order for the xDSL to

receive a second data traffic, **[upon receiving a PPP connect request from a user**

terminal at the LAN interface in a dial-up mode of application, or through the use

of pre-configuration in a leased-line mode of application, the access device

establishes a PPP session with a remote PPP server via its WAN interface, (Tang

et al., Paragraph 12)],

the second interface has an authentication channel in a layer higher than a

physical data transmission layer, **[In the case of the dial-up mode of application, a**

valid PPP username and password is transmitted from the user terminal using a

user interface discussed in further detail, (Tang et al., Paragraph 42)],

the xDSL modem transfers data between the telecommunications network and

the data processing unit based on the first and second data traffic, **[One example**

includes the xDSL (Digital Subscriber Line) type connection using an access

device such as a DSL modem, which connects to the traditional twisted copper

pair telephone lines to deliver high speed data transmission substantially faster

than the traditional 56K dial-up type modems, (Tang et al., Paragraph 2)],

and a control unit that monitors the first data traffic or the second data traffic and

automatically controls a logon procedure and a logoff procedure in the authentication

channel based on the monitored traffic, **[the user terminal LAN connection to the**

access device 105 is monitored to detect when the user terminal 101 has

transmitted a request to terminate the PPP session, or when the WAN connection

106 to the access device 105 is disconnected, (Tang et al., Paragraph 53)],

wherein when data traffic is not detected within a duration of time the control unit

sends a control signal to the xDSL modem and the xDSL modem starts the logoff

procedure which is carried out in the authentication channel, thereby causing the

connection between the xDSL modem and the internet service provider to be logged off,

[If there is such a disconnect or line down detection, at step 310, the PPP session

corresponding to the user terminal 101 is disconnected, while the access device

105 assigns a private IP address to the disconnected user terminal 101 at step

303, and the procedure returns to step 301, (Tang et al., Paragraph 53)],

Tang et al. fails to explicitly teach controlling logon and logoff procedures in the

authentication channel based on the monitored data traffic,

Komine et al. teaches an account authentication means including a user account

management table for managing user account information and managing logon/logoff

state information indicating a logged-on/logged-off state of the server application,

(Komine et al., Col. 9, Lines 38-45), to provide services and to a network monitoring

system for performing distributed processing to monitor a network, **(Komine et al., Col.**

1, Lines 12-16),

It would have been obvious to one of ordinary skill in the art at the time of the

invention was made to modify Tang et al. by controlling logon and logoff procedures in

the authentication channel based on the monitored data traffic, wherein Komine et al.

teaches an account authentication means including a user account management table

for managing user account information and managing logon/logoff state information

indicating a logged-on/logged-off state of the server application, **(Komine et al., Col. 9,**

Lines 38-45), to provide services and to a network monitoring system for performing

distributed processing to monitor a network, **(Komine et al., Col. 1, Lines 12-16).**

Regarding claim 38, the customer premises equipment according to claim 37,

wherein the first data traffic and the second data traffic are monitored, **[the user**

terminal LAN connection to the access device 105 is monitored to detect when

the user terminal 101 has transmitted a request to terminate the PPP session, or

when the WAN connection 106 to the access device 105 is disconnected, (Tang et

al., Paragraph 53)].

Regarding claim 39, the customer premises equipment according to claim 37,

wherein when the xDSL modem is logged off from a connection to the internet service

provider and when the control unit detects the first data traffic: the control unit sends a

control signal to the xDSL modem that trigger the xDSL modem to start the logon

procedure which is carried out in the authentication channel, thereby logging the xDSL

modem logged on to a connection to the internet service provider, **[When configured**

to operate in the NAT router mode, the access device couples to user terminals

via a Local Area Network (LAN) and to a remote server via a Wide Area Network

(WAN). The remote server in turn connects to the Internet, (Tang et al., Paragraph

8)].

Regarding claim 40, the customer premises equipment according to claim 37,

wherein when the xDSL modem is logged off from a connection to the internet service

provider and when the control unit detects the second data traffic: the control unit sends

a control signal to the xDSL modem that trigger the xDSL modem to start the logon

procedure which is carried out in the authentication channel, thereby logging the xDSL

modem logged on to a connection to the internet service provider, **[When configured**

to operate in the NAT router mode, the access device couples to user terminals

via a Local Area Network (LAN) and to a remote server via a Wide Area Network

(WAN). The remote server in turn connects to the Internet, (Tang et al., Paragraph

8)].

Regarding claim 42, the customer premises equipment according to claim 37,

wherein the authentication channel has an authentication protocol embodied in

accordance with a point-to- point protocol, **[the PPP includes three main**

components, Link Control Protocol (LCP), Challenge Handshake Authentication

Protocol/PPP Authentication Protocols (CHAP/PAP), and Internet Protocol

Control Protocol (IPCP), (Tang et al., Paragraph 5)].

Regarding claim 43, the customer premises equipment according to claim 42,

wherein the authentication channel has an authentication protocol embodied in

accordance with a point-to- point over Ethernet protocol, **[the PPP may be referred to**

as PPPoA or PPPoE, the former referring to PPP over ATM (Asynchronous

Transfer Mode), and the latter, referring to PPP over Ethernet, (Tang et al.,

Paragraph 6)].

Claims 32 and 41are rejected under 35 U.S.C. 103(a) as being unpatentable

over Tang et al. (US 2004/0059821), in view of Komine et al. (US 7,281,027) further in

view of Sugikawa et al. (US 5,949,772) and further in view of Humphery et al. (US

2002/00856401).

Regarding claims 32 and 41, the modified Tang et al. teaches a remote server

107 is configured to connect to the data network 109 via a communication link 108. As

discussed above, the data network may include the Internet or a corporate data

network, **(Tang et al., Paragraph 41),**

The modified Tang et al. fails to teach that the subscriber terminal device

includes an xDSL modem and the external data transmission interface transmits data

embodied in accordance with the ITU G.992.1 standard or the ITU G.992.2 standard,

Humphery et al. teaches such non-terminated cables typically exhibit resonance

characteristics at xDSL frequencies, **(Humphery et al., Paragraph 52)**, and use of the

groups of carriers used in the prior art of G.992.1 and G.992.2 for initialization

messages using 8 bit/symbol over 4 carriers (QPSK) downstream direction, **(Humphery**

et al., Paragraph 60), to provide a method of transmitting symbols in a wire line multi-

carrier communication system, **(Humphery et al., Paragraph 18)**,

It would have been obvious to one of ordinary skill in the art at the time of the

invention was made to modify the modified Tang by including an xDSL modem and the

external data transmission interface transmits data embodied in accordance with the

ITU G.992.1 standard or the ITU G.992.2 standard, wherein Humphery et al. teaches

such non-terminated cables typically exhibit resonance characteristics at xDSL

frequencies, **(Humphery et al., Paragraph 52)**, and use of the groups of carriers used

in the prior art of G.992.1 and G.992.2 for initialization messages using 8 bit/symbol

over 4 carriers (QPSK) downstream direction, **(Humphery et al., Paragraph 60)**, to

provide a method of transmitting symbols in a wire line multi-carrier communication

system, **(Humphery et al., Paragraph 18).**

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Shaq Taha** whose telephone number is 571-270-1921. The examiner can normally be reached on 8:30am-5pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Jeff Pwu** can be reached on 571-272-6798.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

/S. T./

Examiner, Art Unit 2446

/Jeffrey Pwu/

Supervisory Patent Examiner, Art Unit 2446